If you are using a printed copy of this procedure, and not the on-screen version, then you MUST make sure the dates at the bottom of the printed copy and the on-screen version match.
The on-screen version of the Collider-Accelerator Department Procedure is the Official Version.
Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A.

C-A OPERATIONS PROCEDURES MANUAL

14.30 C-AD SMD OSH Management Plan for C-AD Accelerators, Experimental Areas, Shops and/or Offices

Text Pages 2 through 9

Hand Processed Changes

HPC No.	Date	Page Nos.	Initials

Approved: _____***Signature on File***_____ _____
Collider-Accelerator Department Chairman Date

Approved: _____***Signature on File***_____ _____
Superconducting Magnet Division Head Date

E. Lessard

14.30 C-A OSH Management Plan for C-AD Accelerators, Experimental Areas, Shops

COLLIDER-ACCELERATOR DEPARTMENT/ SUPERCONDUCTING MAGNET DIVISION **OSH MANAGEMENT PLAN**	**Completed by:** E. Lessard **Date:** February 9, 2005

1. Hazards at Accelerators, Experimental Areas and/or Shops:

- Ionizing Radiation
- Non-Ionizing Radiation
- Hazardous or Toxic Materials
- Radioactive Materials
- Electrical Energy
- Explosive Gases and Liquids
- Oxygen Deficiency
- Kinetic Energy
- Potential Energy
- Thermal Energy
- Noise
- Confined Spaces
- Cryogenic Temperatures

Hazards at Offices:

- Housekeeping Hazards
- Working Environment Hazards
- Flammable or Combustible Materials
- Electrical Energy
- Hazardous or Toxic Materials

2. Department Objectives (See BNL FY05 Critical Outcome, Appendix B, 3.4.1, OSHA Reportable Injury Management and See OSH Management Review Record of Decision for 2004):

1.1. Improve Material Handling Programs
1.2. Streamline OSH and E Management Systems
1.3. Reduce Injury Rates to Meet DOE Expectations
1.4. Compliance With Requirements and Standards
1.5. Renew Emphasis on Fire Protection Upgrades
1.6. Improve Electrical Safety Programs

3. Department Targets (See BNL FY05 Critical Outcome, Appendix B, 3.4.1, OSHA Reportable Injury Management and See OSH Management Review Record of Decision for 2004**:**

1.1.1. Develop manual-lifting guidelines to reduce overexertion injuries
1.1.2. Ensure hoisting and rigging are performed by qualified personnel
1.1.3. Continue to increase awareness of injuries related to overexertion, slips, falls, bodily reaction, and repetitive motion
1.1.4. Develop a Job Risk Assessment for demolition work
1.1.5. Continue to increase worker involvement in the occupational safety and health programs
1.1.6. Implement more effective housekeeping programs in work areas
1.1.7. Encourage the Laboratory to develop a lab-wide program for safety and health review of all purchased items (e.g., rigging equipment)
1.1.8. Encourage the Laboratory to streamline lab-level safety reviews by Committees
1.2.1. Encourage the Laboratory and the Department to increase ESHQ staff productivity by eliminating low-value added ESHQ programs
1.2.2. Reduce the number and frequency of low value-added audits and audit questionnaires
1.2.3. Investigate the use of better outside analytical labs for improved service to BNL
1.3.1. Encourage the Laboratory to expand the risk-based OSH management system (OHSAS 18001) Lab-wide
1.3.2. Maintain DART < 0.5 and TRC rate < 1.1
1.3.3. Reduce number of first aid cases by 10% from FY04 number
1.3.4. Focus the staff to work on eliminating the causes of actual injuries being experienced
1.3.5. Encourage the Laboratory to develop an electrical equipment acceptance program
1.3.6. Encourage the Laboratory to make injury reports available
1.3.7. To reduce stress levels, change time frame for NSF registrations such that they do not coincide with start-up of the physics program
1.3.8. Perform more ergonomic reviews in work areas
1.3.9. Continue to promote the repair of the Building 912 roof
1.3.10. Establish a liaison between C-AD/SMD and OMC to discuss causes of injuries and return to work opportunities
1.3.11. Improve the fall-protection program
1.3.12. Develop a system to identify and capture personal protective equipment costs
1.3.13. Work with the WOSH Committee to suggest ways to implement a system to prevent repetitive OSHA violations
1.4.1. Minimize findings in QA Assessments of OSH topics
1.4.2. Update Job Risk Analyses
1.4.3. Update Facility and Area Risk Analyses
1.4.4. Be prepared for OHSAS 18001 re-registration by 6/05
1.4.5. Increase the number of Building Managers trained in OHSA regulations
1.4.6. Close out WOSH Committee issues within 90 days
1.4.7. Close out Tier 1 issues within designated times
1.4.8. Improve the OSH records filing system for records at C-AD
1.4.9. Meet BNL requirements on closure of OSHA findings
1.4.10. Maintain staff training > 95% complete
1.5.1. Continue to promote the upgrade of aging fire-alarm panels at C-AD
1.5.2. Restart the stalled Fire Hazards Analysis program

1.5.3. Encourage the Laboratory to develop an electrical equipment acceptance program for non-UL equipment
1.6.1. Implement NFPA 70E PPE requirements
1.6.2. Implement BNL's recommendations related to NRTL requirements

4. OSH Performance Indicator(s):

- Tier I inspection results
- Injury/ Illness Rates
- The number of Occurrence Reports and Critiques dealing OSH
- Completion of tasks listed in Section 10

5. Plan Description:

The OSH Management Plan is assured through a documented program of safety reviews, risk assessments and work planning. OSH subject matter experts from the BNL Safety and Health Services Division (SHSD) serve on the C-AD safety committees. The C-AD safety review committees include the Accelerator Systems Safety Review Committee (ASSRC) and the Experimental Safety Review Committee (ESRC), which are the focal point for documenting safety issues for new or modified accelerators and experiments. The SMD safety review is performed by the BNL LESHC Cryogenic Safety Sub Committee. Radiological issues are reviewed by the Radiation Safety Committee (RSC) and the ALARA Committee. The physical plant is inspected regularly for OSHA compliance via the Tier 1 process. See the ESHQ Committees Web Page and the LESHC Web Page. It is the responsibility of the subject matter experts from SHSD to help review activities brought before the committees for implementation of OSH controls.

Day to day OSH issues and action items are addressed, as appropriate, through the work planning process documented in C-A-OPM 2.28 and C-A-OPM 2.29. For the SMD, work planning and control is documented in SMD OPM 2.12.

OSH issues and action items are addressed in offices through periodic ergonomic review as indicated in the Subject Area for Occupational Ergonomics. Housekeeping is a direct responsibility of all employees, and each employee is held accountable to do the things necessary to implement an effective housekeeping program (see Housekeeping Policy).

The Self-Assessment (SA) program, Worker Occupational Safety and Health Committee, OSH/EMS/SA Management Review, Tier I inspections, Facility-Area and Job Risk Assessments, and the annual OSH audit are also designed to help the meet the FY05 objectives in this Plan. Tracking and trending illness/injury rates as well as on time regulatory reporting contribute towards achieving OSH objectives and targets.

It is noted that the C-A/SMD OSH management system is also intended to capture the five core-functions and 7 Guiding Principles from DOE's Integrated Safety Management System Guide, DOE P 450.4.

- Core Function 1, Define Scope of Work
- Core Function 2, Analyze Hazards
- Core Function 3, Develop/Implement Controls
- Core Function 4, Perform Work and Operation Authorization
- Core Function 5, Feedback/ Improvement
- Guiding Principle 1, Line Manager Clearly Responsible for ESH

- Guiding Principle 2, Clear ESH Roles and Responsibilities
- Guiding Principle 3, Competence Commensurate with Responsibilities
- Guiding Principle 4, Balanced Priorities
- Guiding Principle 5, Identify ESH Standards and Requirements
- Guiding Principle 6, Hazard Controls Tailored to the Work
- Guiding Principle 7, Operations Authorization

6. Potential Impact(s):

- Unsafe acts could injure personnel
- Undocumented or unreported OSH events could violate DOE requirements
- Improper compliance with SBMS requirements could create hazardous work environments, which could injure workers

7. Legal and Other Requirements:

ESH Standards
1.2.1. Corrective Action Management and Tracking for Internal and External Assessments
1.4.0 Compressed Gas Cylinder Safety
1.4.1 Pressurized Systems for Experimental Use
1.4.2 Glass and Plastic Window Design for Pressure Vessels
1.5.0 Electrical Safety
1.5.1 Lockout/Tagout Requirements
1.5.2 Design Criteria for Electrical Equipment
1.5.3 Interlock Safety for Protection of Personnel
1.11.0 Aviation Safety
1.12.0 Marine Safety
1.12.1 Diving
1.14.0 Identification of Piping Systems
2.1.3 Pesticides
2.6.0 Sanitation
5.1.0 Nonflammable Cryogenic Liquids

Subject Areas
Beryllium
Biosafety in Research
Bloodborne Pathogens
Chemicals, Working with
Confined Spaces
Construction Safety
Emergency Preparedness
Environment, Safety, Health and Quality (Tier I) Inspections
Excavation Safety
Investigation of Incidents, Accidents and Injuries
Laser Safety
Lifting Safety
Lead
Lifting Safety
Natural Hazards in the Environment
Noise and Hearing Conservation
Oxygen Deficiency Hazards (ODH), System Classification and Controls
Personal Protective Equipment
Radiofrequency/Microwave Radiation
Respiratory Protection
Static Magnetic Fields
Traffic Safety

8. Operational Controls: See OSH Operational Controls Form

9. Budget: Operating Budget

10. Structure, Authorities, Responsibilities

Tasks, Person Responsible, Completion Dates

Objective 1, Improve Material Handling Programs

- Develop manual-lifting guidelines to reduce overexertion injuries. Ray Karol 7/30/05
- Ensure hoisting and rigging are performed by qualified personnel with the requisite knowledge, ability, training and experience. Ray Karol 7/30/05
- Continue to increase awareness of injuries related to overexertion, slips and falls, bodily reaction, and repetitive motion. Ed Lessard 7/30/05
- Develop a Job Risk Assessment for demolition/decontamination work. Joel Scott 2/15/05
- Continue to increase worker involvement in the occupational safety and health programs (WOSH Committee, Safety Walk Program, Self-Evaluation Program). Ray Karol 7/30/05
- Implement more effective housekeeping programs in the work areas. John Benante, Al Pendzick 5/15/05
- Encourage the Laboratory to develop a lab-wide program for safety and health review of all purchased items (e.g., rigging equipment) including purchase requisitions related to the procurement of safety and health items such as safety shoes and fall-protection equipment. Dave Passarello 5/15/04
- Encourage the Laboratory to streamline lab-level safety reviews by Committees; e.g., a permit program could be used in place of lab-level Committee review. Ed Lessard 7/30/05

Objective 2, Streamline OSH and E Management Systems

- Encourage the Laboratory and the Department to increase ESHQ staff productivity by eliminating low-value programs (e.g., FUA program, whole-body counting). Reducing the number and frequency of audits and audit questionnaires would also increase productivity. Ed Lessard 7/30/05
- Environmental and Waste Management Services Division's experience with outside analytical labs may be useful in providing improved service to BNL. Discussion should be implemented with EWMSD in this regard. Joel Scott 3/15/05

Objective 3, Reduce Injury Rates to Meet DOE Expectations

- Encourage the Laboratory to expand the risk-based OSH management system (OHSAS 18001) Lab-wide. Ed Lessard 9/30/05
- Maintain DART < 0.5 and TRC rate < 1.1. Ed Lessard 9/30/05
- Reduce number of first aid cases by 10% from FY04 number. Ed Lessard 9/30/05
- Focus the staff to work on eliminating the causes of actual injuries being experienced at BNL. Ed Lessard 7/30/05
- Encourage the Laboratory to develop an electrical equipment acceptance program for non-UL equipment. Jon Sandberg 2/1/05
- Jack Ellerkamp's weekly/monthly summaries of injury and illness statistics were useful. Encourage the Compliance Suite administrator to make available a report that provides the same information that was previously reported in the Ellerkamp reports. Dave Passarello 3/15/05
- There is a need to reduce stress levels at C-AD at the end of the fiscal year, and it is suggested that the time frame for NSF registrations be such that they do not coincide with start-up of the physics programs in September or October. The June time frame for ISO 14001 was a good choice this year. Ed Lessard 6/1/05
- Perform more ergonomic reviews in work areas. Peter Cirnigliaro 7/30/05
- Continue to promote the repair of the Building 912 roof. Al Pendzick 7/30/05
- Establish a liaison between C-AD/SMD and OMC to discuss causes of injuries and return to work opportunities. Ray Karol 1/15/05
- Improve the fall-protection program. Peter Cirnigliaro 5/15/05
- Develop a system to identify and capture personal protective equipment costs. Dick Savage 2/1/05
- The Tier 1 inspection program has found and reported numerous repetitive OSHA violations (easy stuff, such as blocked electrical panels). The C-AD ESHQ Division should work with the WOSH Committee to suggest ways to implement a system to prevent repetitive violations. Asher Etkin 1/15/05

Objective 4, Compliance With Requirements and Standards

- Minimize findings in QA Assessments of OSH topics. Ed Lessard 9/05
- Update Job Risk Analyses. Ray Karol, Chris Porretto and Jim Durnan 6/05
- Update Facility and Area Risk Analyses. Ray Karol, Chris Porretto and Jim Durnan 6/05
- Be prepared for OHSAS 18001 re-registrations by 6/05. Ed Lessard
- Increase the number of Building Managers trained in OSHA regulations. Ray Karol, Chris Porretto and Jim Durnan 6/05
- Close out WOSH Committee issues within 90 days. Dick Savage and Jim Durnan 6/05
- Close out Tier 1 issues within designated times. Asher Etkin and Jim Durnan 6/05
- Improve the OSH records filing system for records at C-AD. Dave Passarello 6/05
- Meet BNL requirements on closure of OSHA findings. Dave Passarello 9/05
- Maintain staff training > 95% complete. John Maraviglia and Chris Porretto 6/05

Objective 5, Renew Emphasis on Fire Protection Upgrades

- Continue to promote the upgrade of aging fire-alarm panels at C-AD. Tom Nehring 5/15/05
- Restart the stalled Fire Hazards Analysis program. Ray Karol 4/30/05
- Encourage the Laboratory to develop an electrical equipment acceptance program for non-UL equipment. Jon Sandberg 2/1/05

Objective 6, Improve C-AD Electrical Safety Programs

- Implement NFPA 70E PPE requirements. Lessard 6/05
- Implement BNL's recommendations related to NRTL requirements. Sandberg 9/30/05.